

Fair Radio Sales Co.

1016 E. EUREKA ST. • P.O. BOX 1105 • LIMA, OHIO 45802

BULK RATE
U.S. POSTAGE
PAID
Lima, OH 45802
Permit No. 114

FALL 1994 CATALOG SUPPLEMENT

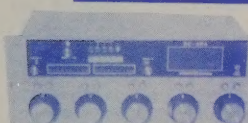
PHONES: 419/227-6573 or 223-2196
FAX MACHINE: 419/227-1313
MON.-FRI. 9-5:30, SAT. 9-1

**PRICES ARE F.O.B. LIMA, OH
ALLOW FOR SHIPPING CHARGES!**

**ITEMS OVFR 70 LBS. SHIPPED
MOTOR FREIGHT COLLECT**

**INCLUDE PAYMENT IN FULL
USE YOUR VISA OR MASTERCARD**

RAMKO AUDIO MIXER

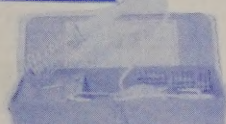


RAMKO DC-5RA 5-INPUT AMP/MIXER, each input has Level Control and can be connected to "A" or "B" buss or not connected to either. Each

buss has LED VU-meter and Master gain control. Input level -60 DBM 510 ohms/0 DB 560K ohms; factory set @ 0 DB, but changeable per directions in manual. Response 20 Hz-20 KHz. Speaker monitors input channel; with manual copy. Requires 115 VAC 60 Hz; 7x19x15, 17 lbs sh. USED-EXCELLENT, not-tested, \$99.50

SOLDERING KIT

WELLER SOLDER / DESOLDER STATION with TCP-24G 48 W pencil iron, eight solder tips from 3/64" to 1/8" wide, 600 or 700 F; six desolder tips with orifices .038" to .090"; and 2.5"H x 13"Wx4"D steel carrying case. Requires 115 VAC 60 Hz; 7 lbs sh. #WTCPK, UNUSED, \$69.50



30-300 MHZ RECEIVER



R-1283/GRC RECEIVER covers VHF in bands 30 to 90 and 90

to 300 MHz AM-FM-CW-Pulse continuously tunable; 21.4 MHz IF. Selectable bandwidths 60 or 300 KHz and 3 MHz. Solid-state except for 8058 and 6CW4 nuvistors in tuners. With Tuning and Level meters, BFO, AGC, video output & N connections. Requires 115 V 60 Hz; 3.5x19x17, 30 lbs sh. Used-repairable, \$145.00 MANUAL for R-1283, partial repro, \$15 w/set

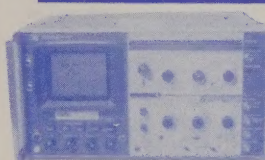
WIND DIRECTION METER

ID-373B/GMQ-11 WIND DIRECTION INDICATOR, has illuminated 4.5" dia 0-360 degree wind direction and 0-120 knot wind speed meter in 21.5"Wx11"Hx8.5"D sloped cabinet. Direction indicator has



115 VAC 60 Hz selsyn designed for input from external 115 V 60 Hz selsyn transmitter (not supplied). Speed indicator requires maximum 9.2 VDC input from an external 1800 RPM generator. Measured speed proportional to actual voltage input; 22#. UNUSED w/diagram, \$65

H-P SPECTRUM ANALYZER



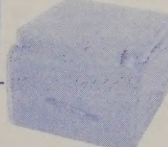
HEWLETT-PACKARD 141T/8552B/8553B SPECTRUM ANALYZER, popular 141T main-frame has 8x10 division display. 8552B high resolution IF plug-in section has 20 Hz-

300 KHz freq-range with 10 calibrated scan widths 20 Hz to 20 KHz/div. 8553B RF plug-in tunes 1 KHz to 110 MHz in 18 calibrated scan widths 20 Hz-10 MHz/div in 1-2-5 sequence. Resolution bandwidths adjust 300 KHz down to 10 Hz. Amplitude variable -140 to 10 DBM. Requires 120/240 VAC 50-60 Hz; 8.8x16.8x16.4 60 lbs sh. USED-REPAIRABLE w/output, \$1500.00

HP-141T/8552B with 8554B 100 KHz-1250 MHz RF plug-in, USED-REPAIRABLE, \$1750.00 HP-8556A RF SECTION, 20 Hz-300 KHz, \$175.00 * or \$100.00 if purchased w/141T set. *

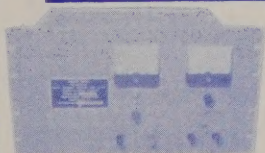
12 VDC 24 AMPS

YUASA LEAD-ACID RECHARGEABLE BATTERY, rated 12 VDC 24 amp-hour; May 1993 date code. 6.3x4.8x7, 20 lbs sh wt. #NP-24-12, UNUSED, \$29.50



MILITARY BB-557 NICKEL-CADMIUM BATTERY rated 24 VDC 0.45 amp-hours @ 0.5 amps using two separate 12 V outputs. Has newer style 5-pin connection for cable; 4x4.3x1.5, 3 lbs sh UNUSED, \$14.95 ea

0-36 V 15 AMP SUPPLY



115/230 VAC 50-60 Hz 10/5 amps. Triantron mfg; 10.5x19x13.5, 75 lbs sh. UNUSED, \$175.

PP-2309C DC POWER SUPPLY, metered output 0-36 VDC 15 amps with controls VOLTS ADJ. DC Output ON/OFF; +/- terminals, fused Input and DC Outputs. Requires

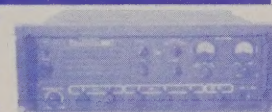
24 VDC 10 AMPS

ELPAC DC POWER SUPPLY output +/-24 VDC 10.4 A from 120/240 V 50-60 Hz input. Modular-type; 5.8x10.3x10.34#. #ELV250-24, UNUSED, \$49.50 POWER-MATE PXS-EE-28V, 28 VDC 17 AMP output; 115 VAC in. 5x7.5x17, 41 lbs. UNUSED, \$75.



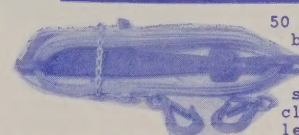
SUNAIR HF-SSB RECEIVER

SUNAIR GSR-920 HF RECEIVER, rugged solid-state synthesized unit operates over 1.6 to 30 MHz LSB-USB



-AM-CW-LSB using six decade ranges in 100 Hz steps (284000 channels) plus VFO. Built-in Presetselect with Increase-Decrease control provides sensitivity < 1 uv. Also meters for LSB and USB, speaker & phone jack. Controls for Volume, RF Gain, OFF-Local-Speaker-Remote-Both. Manual not available. Requires 115/230 V 48-65 Hz or 12/24 VDC 7/3 A. 6.1x18.5x18.3, 47 lbs. USED-operational, \$950.00

STEEL GUY ASSEMBLY

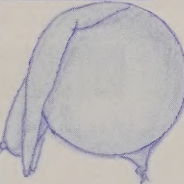


50 foot 3/16" steel braid wire with 2 heavy-duty snap hooks on 17" lg steel bracket. Includes locking pulley and tension

adjustor; flanges for storing guy. Designed for military antenna or other wire support uses; 8 lbs sh. #SMD-423629, UNUSED, \$16.95

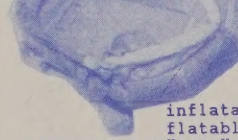
7' WEATHER BALLOON

ML-541A WEATHER BALLOON, 7 feet diameter streamline sounding type designed for rapid 1700 ft/minute ascent to carry meteorological equipment to upper atmosphere. 2500 gram free lift; bursting altitude 75000 ft. (Specs based upon hydrogen fill. Use of



helium or air alters performance.) Two 4.5"L x1" dia necks; neoprene, 2/86 date code. 5 lbs sh. UNUSED, \$17.95 each; 2 for \$32.00

ONE MAN RAFT



LR-1 SURVIVAL RAFT, rugged one-man life raft designed for US aircraft pilots has black rubberized fiber

inflatable sides and a non-inflatable nylon rip-stop floor. Inflates to 62"Lx12"Hx34"W overal using manual inflation tube or CO charge. Fore and aft covers join with velcro strips to keep waves from filling raft. Cover's underside is high visibility "hot pink" color. Other features are ballast bags for stability and nylon water anchor; 5 lbs sh. UNUSED, \$69.50

32 MF 4500 V

ENERGY STORAGE CAPACITORS, non-PCB; each 10x4.5x3.5, 10 lbs sh. USED-clean:
32 MF 4500 VDC, \$36.00
88 MF 1200 VDC, \$17.50
224 MF 1500 V, \$27.00
8 MF 4000 VDC case ground; 8.3x3.5x2, 7 lbs sh. \$11 ea. 4/\$39.

+++++
20 MF 1500 VDC, 6.8"Hx10"Wx4"D, 15 lbs. \$15.
10 MF 2500 VDC, 9.8"Hx4.5"Wx3.5"D, 9#. \$12.
26.9 MF 5000 VDC case ground; 16.5"Hx16"Wx4" W; 48 lbs sh. NEW, \$35.00

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AC CAPACITORS, non-PCB; 4 lbs sh. NEW:
2 x 100 MF 240 VAC, 10"Hx3.5"Wx1.8"D, \$12.
50 MF 370 VAC, 9.5"Hx3.5"Wx1.8"D, \$8.00
10 MF 440 VAC, 4"Hx.8"Wx1.8"D, 1 lb.. \$3.50
35 MF 440 VAC, 9"Hx3.5"Wx1.8"D, \$7.50

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COMPUTER GRADE CAPACITORS, unused or new:
18000 MF 50 VDC, 6"H x 3" dia, 1 lb. \$3.00
14000 MF 75 VDC, 6"H x 3" dia, \$4.00
32000 MF 75 VDC, 4.5"H x 3" dia, \$7.50
3000 MF 300 VDC, 6"H x 2.5" dia, \$6.50
2500 MF 350 VDC, 6"H x 3" dia, \$7.00
Buy 5 or more one type, TAKE 20% OFF PRICE!

SPRAGUE ELECTROLYTIC CAPACITOR, can-type;
2x47 MF 350 VDC, 3.5"Hx1.4" dia. NEW, \$1.00

NON-INDUCTIVE RESISTOR, 120 ohm 125 watt;
8"L x 1" dia. Carborundum mfg. NEW, \$4.50

GLASS CAPS

0.001 MFD HIGH VOLTAGE GLASS CAPACITORS, 6-32 thread each end. NEW:
#GC-80K001, 80 KV-DC 10"Lx1.5" dia, 2#. \$24
#GC-25K001, 25 KV-DC 6.5"Lx1.4" dia, \$12.50
#GC-14K001, 14 KV-DC 4.1"Lx1.4" dia, \$ 9.00
#GC-2K05, 2 KV 0.05 MFD, 2.5"Lx0.8"d \$ 3.00
15 KV DOORKNOB CAPACITORS, Centralab 857 or equal removed from equipment; 1.8"Hx1.3"dia, 1 lb sh. SPECIFY: 40 PF or 50 PF, \$10.00 each

VACUUM CAPACITORS

MLC-1000-30 JENNINGS FIXED VACUUM CAPACITOR, 1000 pf 30 KV; 8.5"Lx4" dia, 4 lbs sh. UNUSED, \$95.00
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VACUUM VARIABLE CAPACITORS, limited supply:
UCSL-250-5, 4-250 pf 5 KV peak; 4.3"L x 2.3" dia. Shaft 1/4" dia; 3 lbs sh. USED, \$95.
UCSX-700-15, 25-700 pf 15 KV peak; 9.8"L x 3.8" dia. Shaft 3/8" dia; 6#. USED, \$175.
UCSL-1000-3, 3-1000 pf 3 KV peak; 7.6"Lx3.1" dia. Shaft 1/4" dia; 4 lbs sh. USED, \$110.
UCSXF-1200-10 20-1200 pf 10 KV peak; 10"L x 5.1" dia. Shaft 3/8" dia; 6#. UNUSED, \$235
CVFB-1500-40, ceramic 20-1500 pf 40 KV peak; 12.5"Lx6.5" d. Shaft 3/8"; 26#. UNUSED, \$750
UCSXF-2300-10, 60-2300 pf 10 KV peak; 10"L x 5.1" dia. Shaft 3/8" dia; 7#. UNUSED, \$365

AIR VARIABLE CAPS

3-GANG AIR VARIABLE CAPACITOR, 20-540 PF per section; 500 V peak. Shaft 3/4"Lx1/4" dia; o/a 4x1.5x2, 1#. #ASP-074-048, NEW, \$9.95
JOHNSON SINGLE-SECTION AIR VARIABLE CAPACITORS, 1500 V pk; shaft 1/2"Lx1/4" dia. NEW: #167-11-1, 7-99 pf; o/a 3"Lx1.3x1.4, \$4.50
#167-3-1, 5-51 pf; o/a 2"Lx1.3x1.4, \$2.50

4X150 DUAL SOCKET

4X150/4CX250 DUAL SOCKET ASSEMBLY, two sockets on 4.3" x 2.9" metal chassis with 1.1"H bakelite chimneys; 2 lbs sh. #4X150/T195, USED, \$12.00
+++++
4X150D POWER TUBES with 26 VDC filaments, used-checked, \$25.00 \$16.00 each
4CX1000A/8168 EIMAC, used/lab-tested, \$200.

CLASS C POWER AMP



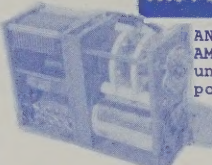
CLASS C POWER AMPLIFIER removed from T-195/GRC 100 watt transmitter; uses 4X150D tube to cover 1.5 to 20 MHz in ten bands using variable and fixed capacitors, switches, and 400 Hz servo motor. Chassis also has discriminator and servo amp. Requires -1000 VDC modulated, -250 VDC, -45 VDC & 115 V 400 Hz for motor. W/tubes 4X150D, 5751, 6AQ5, 5763 and schematic. 9.5x8.5x6, 15#. PA/T195 used, \$45. \$27.

60 UH RIBBON INDUCTOR

VARIABLE RIBBON INDUCTOR with motor drive p/o T-195 2-20 MHz 100 W transmitter. Consists of two 4.6"Lx2.8" dia drums (one slug core) and 3/16" wide silvered-ribbon which wraps 30 turns into 4" long coil; approx 60 uH. 26 VDC motor turns drums and transfers ribbon from one to the other. Also 115 VAC 400 Hz servo originally used in T-195 discriminator circuit. 8.3x5.6 x6.3; 10#. #L1101/T-195, used, \$29.50 \$22.50



ANTENNA LOAD ASSY



ANTENNA LOAD ASSEMBLY from AM-3349/GRC-106, incomplete unit includes S1 2-deck 5-position ceramic switch, L2 37 uH inductor, C27 15-355 pf air variable capacitor, 26/ 1000 pf feed-thru capacitors, and two Globe or = 24 VDC motors. LESS C26 vacuum variable capacitor and L1 variable inductor. Sawing or cutting of plastic support plates required for recovery of parts. 5.5x9.5x5.5, 8 lbs sh. USED-"AS-IS", \$17.95

900 UH COIL

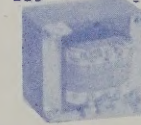
INDUCTOR COIL, tests to about 900 uH (0.9 mH); would make an impressive variable inductor, if end plates & roller assembly were added! 5.5" dia coil is wound 97 turns of #16 silver-tinned wire to 12.1" length + 20 turns to 16.1"L total. Fiberglass coil form 20.3"L; 10 lbs sh. #284-5733, UNUSED, \$32.00

VARIABLE TRANSFORMERS

TECHNIPOWER 3 VARIABLE TRANSFORMER, 115 V motor-driven unit includes three-ganged Variacs each with output 0-130 VAC 10 amps. Not enclosed; less dial & knob. 6x20 x7.4, 50 lbs sh. #3060-9030, UNUSED, \$135.00
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STACO 033-3612 (or =) AUTOTRANSFORMER, output 0-120/140 V 10 amps from 120 V 50/60 Hz input. Enclosed-type w/two meters, outlet & cord. 9.7x12.3x6, 25 lbs. USED-CHECKED \$150
POWERSTAT 10B 0-130 V 1.75 AMP output; 115 V 60 Hz in. Not enclosed; no dial. USED, \$18.
* MANY OTHERS AVAILABLE. WRITE YOUR NEEDS! *



TRIAD ISOLATION TRANSFORMERS, unused: #N-57M, 115 V 50-60 Hz to 115 V 500 VA with outlet; wire leads. 5.3x4.5x6.3, 27#. \$45.
#N-66A, 115/230 V 50-60 Hz to 115 V 250 VA; wire leads. 4.6x3.9x4.6, 15 lbs sh. \$24.00



STANCOR MULTI-FILAMENT TRANSFORMER, primary 115 VAC 50-60 Hz. Secondaries: two 5 V 3 amp, 7.5/6.3 VCT 3 amp, 6.3 VCT 4 amps. 2.9x3.3x3.4, 7 lbs sh. #P-6333, UNUSED, \$9.95

2600 VOLT TRANSFORMER tapped 1600 V 120 MA from 115 VAC 50-60 Hz primary; sealed-type. 5.9x7.4x4.8, 26 lbs. #BP18584, used, \$22.

TELEX HEADSET



TELEX PH-11 600 OHM HEADSET, comfortable single phone set has 3.5"x4" vinyl-covered foam cushion and padded headband. 60" long 2-conductor cord has 3-pin Lemo FGG.1B connector which can be changed. 2 lbs sh. USED-excellent, \$16.95

MILITARY HEADSETS

H-113 600 OHM HEADSET, similar to CW-49507 except O.D. green color with cushions and PL-54 plug on 18" cord; 3 lbs sh. UNUSED, \$9.95 \$7.95



H-16 HEADSET, designed for use in high-noise areas such as tanks, etc. replacing HS-30. 250 ohm elements with matching transformers produce 8000 ohm (series) impedance. Similar to H-65 except 18" cord & PJO-54 plug. UNUSED, \$10.

CD-307 EXTENSION CORD for H-113 or H-16; 65" cord w/JK-26 jack & PL-55 plug. UNUSED \$3.50

H-227 HEADSET with two 300 ohm elements in 4"x3.5" vinyl cushions and 42" coil cord and U-77 plug. Similar to H-140 except designed for use with GRC-106 and related radios. OD-green & black; 2 lbs sh. Used, \$16.95



H-350/U VOICE-SECURE HANDSET, with coil cord & U-229 connector; similar to H-250 handset except has center contact for use with secure-communications equipment. Usable with non-secure equipment also; 3 lbs. USED-CHECKED, \$22.50

THROAT MIC



T-30 THROAT MIC, designed during WW-2 for communication in high noise areas such as aircraft and tanks. 75 ohm elements fit against user's larynx and are held in place by elastic neck strap. Has 11" cord with PL-291 plug that mates CD-318 switch cord (not supplied). UNUSED, \$10.00 ea

TA-1/PT TELEPHONE

TA-1/PT TELEPHONE, sound-powered unit requires 2-conductor field phone wire connected to another TA-1 for communication without batteries. Palm-operated generator provides approx 100 V to "buzz" - signal another phone; also visual indicator. Has coil cord with push terminals for wire hook-up and plastic carrying case. 8.5x3.5x3.5, 4 lbs. USED-CHECKED, \$35 ea. 2 for \$60.00

TS-10* SOUND-POWERED HANDSET w/ 66" cord and two clips for attaching directly to field wire or terminals; does not have signalling capability. 5 lbs sh. USED-CHECKED, \$37.50

PHONE JACK STRIPS

INTERBAY TRUNK MODULE, a jack strip with 24 pairs of phone plug receptacles with indicator lights. Also four Cinch 25-contact in-line plugs on short cables. 3.5x19x8.3, 15#. #CSA-2901, USED-CLEAN, \$20.



EQUIPMENT GLIDES

Military quality EQUIPMENT GLIDES for rack mounting; 2"W x 18"L chassis slides have 21" travel; load rating approx 100 lbs. 6 lbs sh. #GL-1821, used, \$9 /pair.



TCS XMITTER

TCS TRANSMITTER, vintage WW-2 Navy transmitter covers 1500-12000 KC in bands 1500-3000, 3000-6000, and 6000-15000 KC Voice-CW continuously tuned plus

provision for four crystal channels. Output: 20 watts voice, 40 W CW depending on antenna type. Carbon mic input 100 ohms resistive. Has meters Antenna Current 0-3 amps RF and Plate Current 0-200 MA-DC. Controls for Coupling, Plate Tune, ANT Cond SERIES-OFF-PARALLEL, Tuning, Band Switch, Oscillator Select MO-MO TEST-COI-2-3-4. Units are MISSING the ANTENNA LOAD control and coil! With tubes 3/12A6, 4/1625. Requires 12 VDC 2 amps, 220 VDC 50 MA, and 440 VDC 200 MA originally supplied by dynamotor (not available). 11.7x13.8x11.8, 46 lbs sh. USED, LESS Load Coil assembly, \$75.00

INPUT CABLE for TCS transmitter, \$10.00
MANUAL for TCS radio set, partial repro, \$12
TCS NOISE LIMITER CONVERSION KIT for TCS receiver, includes 6H6 tube & other parts. \$4

ZB-3 HOMING ADAPTOR

ZB-3 RADIO HOMING ADAPTER SET, early WW-2 aircraft set was designed to receive 234-258 MHz signals which were amplitude modulated by 540-830 KHz keyed CW. The keyed modulated component was fed to the aircraft's RU- or ARA-series communication radios where the signal was amplified to audio tone. Includes CW-69076 homing adaptor (looks like R-1/ARR-1) which uses four 954 tubes and has tuning dial and antenna trimmer on front; two UHF connections on rear. Also includes CW-23214 pilot's control box, CW-29173 relay box, spares box with 4/954 tubes and other small parts. Requires 12 or 24 VDC and 220 VDC. CW-69076 3.8x3.9x12.3; set 15 lbs sh. UNUSED in musty box, w/manual copy, \$79.50

CH-291 BOX

CH-291 BATTERY BOX for use with WW-2 vintage BC-1335 transceiver (SCR-619). Designed to hold three BB-54 batteries (not available). 6x6.6 x12.6, 7 lbs sh. UNUSED, \$20.

MS-55 and MS-56 MAST SECTIONS, hard-to-find larger diameter bottom sections in the MS-49 thru MS-56 3 foot mast series; 2 lbs sh. UNUSED, but may need repaint, \$6.00 each

SUNAIR ANTENNA COUPLER

CU-2292/URC-92 (Sunair GCU-935) AUTOMATIC ANTENNA COUPLER designed for GSE-900 1.6-30 MHz transceiver, external control needed for other HF radios. Has Jennings CVCJ-1000-5 or = ceramic vacuum variable capacitor, 23 uH roller inductor, six 100 pf 5 KV doorknob capacitors, and two 19 VDC motors to belt-drive tune. Times 3 sec typical, 30 sec max. Has front 3.5"L antenna lead insulator and N coax connection; aluminum all-weather cover. O/a 9x8.4x14.5, 22 lbs sh. USED w/schematic, \$200.

HOMING ANTENNA

AT-339/PRC HOMING ANTENNA for use with RT-176/PRC-10 transceiver. Fold-out hand-held diamond-shaped loop tunes 47-55.4 MHz. Has 5-position attenuator, Sense-Normal switch, and 48" BNC cable. Includes CW-258 canvas bag. O/a 24"x13.5"W x3.5"D; collapses to 12.3x3.3x3.5, 7 lbs. UNUSED \$27.

ELECTRONIC FILTER

SKL 302 DUAL VARIABLE ELECTRONIC FILTER, each with high and low pass filtering. Cut-off frequency range 20 Hz - 200 KHz using scales X10-X100-X1K-X10K. High pass >90 DB limited by hum & noise. Low pass 60 DB on 10K range; 90 DB below 1 MHz, 60 DB above. Insertion loss: 0 DB +/-1 DB for 20-20K Hz cut-off; +/-2 DB 20K-200K Hz. Input impedance 2 megohms shunted by 32 pf; output 300 ohms. Max-signal in 6 V peak. W/tubes 10/12AT7, 0A2, 6AV6, 2/6AV5 or 6AQ5. Requires 105-125 VAC 50-60 Hz; 5.2x19x13.6, 30 lbs. USED-REPARABLE w/book repro, \$85.00

RADIOMETER AFM 2 MODULATION METER, 7-1000 MHz AM-FM in 8-bands & F+2 MHz oscillator range. 50 ohm input attenuator 10-10-20 DB. IF bandwidth: 20 or 400 KHz. Filter: 3-15-75-200 KHz; 50-75-175 us-6 DB. Requires 115 VAC 50-60 Hz or 25 VDC. 7x19x12, 35 lbs. USED-REPARABLE, \$450.

TV-7D TUBE TESTER

TV-7D TUBE CHECKER, D-model of this popular portable tester has added ferrite beads in wiring to reduce oscillation of high-gain tubes. Tests most military and older commercial receiving & low-power xmitting tubes. Indicates dynamic mutual conductance, emissions, gas, noise & shorts. Test sockets for octal, locial, 4-,5-,6-,7-pin, 7- and 9-pin miniature, acorn, flat and round subminiature tube base sizes. With tube test data book & one test lead. Requires 115 V 50-1000 Hz. 6.3x8.5x15.8, 22 lbs. USED-CHECKED, \$115.00
MANUAL for TV-7-A-B-D, partial repro, \$10.

TUBE TEST ADAPTERS for TV-7, used:
#E104 for sub-mini tubes, \$5.00
#E105 for 829/832, \$7. #E107 for 2C39, \$7.
REPLACEMENT METER for TV-7D, UNUSED, \$15.00
7- and 9-PIN MINI PIN STRAIGHTENERS, \$3.50/ set

TV-2 TUBE CHECKER, larger, more complex unit than TV-7; separate meters & controls for Filament, Grid, Plate, Screen, Signal, etc. 17.8x8.5x16.3, 50 lbs. USED-CHECKED, \$225.
MANUAL for TV-2, partial repro, \$10.00

AN/PRM-10 GRID DIP METER w/ coils for 2-400 MHz to determine resonant frequency of tuned circuits; 22 lbs. USED-CHECKED w/book, \$160.

HP-427A VOLTMETER

HP-427A ANALOG VOLTMETER with mirrored meter scale; has full scale ranges 100 MV-1000 VDC in 9 steps in 1-3-10 sequence, 10 mv-300 VAC @ 10 Hz-1 MHz, and resistance 10 ohms-10 Megohms in seven decade ranges. Requires 115/230 V 48-440 Hz or 22.5 VDC. 6.3x5.1x8, 9 lbs sh. USED, \$115.00

HEWLETT-PACKARD COAXIAL FREQUENCY METERS, 6 lbs sh. Specify:
G532A, 3.95-5.3 GHz, \$250.00
J532A, 5.3-8.2 GHz, \$350.00
S532A, 12.4-18 GHz, \$250.00
X532B, 8.2-12.4 GHz, \$250.00
S36A, 960-4200 MHz, \$395.00
S37A, 3.7-12.4 GHz, \$295.00
VARIABLE MICROWAVE ATTENUATORS:
G382A, \$250. J382A, \$300. P382A, \$200.
S382C, \$500. X382A, \$150.
H-P DIRECTIONAL COUPLERS: G752C, \$125.
J752D, \$175. P752C, \$125. X752C, \$125.

AM-4543/TSC-38 HF POWER AMP by Harris-Gates; 2-30 MHz range 10 KW PEP-average using 4CX10000 tube. RF input: 100 mw, 1.5:1 VSWR. Output impedance 50 ohms 3:1 VSWR; 1-5/8 EIA flange connection. Requires 185-240 V 45-63 Hz 3 O; w/ manual copy. 69x20x27, 1550 lbs. USED-not tested, less 4CX10000, \$4000.00

H-P DISTORTION ANALYZERS

HEWLETT-PACKARD 334A DISTORTION ANALYZER, solid-state unit measures total distortion to 0.1% of full scale over 5 Hz to 600 KHz and harmonics indicated to 3 MHz. Distortion levels of 0.1% to 100% measured full scale in 7 ranges and noise levels as low as 50 mv. Fundamental rejection >80 DB. Automatic fundamental nulling feature speeds up measurement process by completing rejection of fundamental when manually tuned within 10% of Set Level reference. Also has high impedance DC restoring AM detector which operates from 0.55 to 65 MHz. Wide voltmeter indicates 300 uv to 300 V rms full scale in 13 ranges, 10 DB/range. Requires 115/230 VAC 60 Hz; 16.8x5x13.3, 22 lbs sh. Used-reparable, \$395.00; CHECKED, \$495. MANUAL, partial repro, \$15.00
HP-333A, like 334A but no AM detector, \$450.
HP-332A, like 333A but no auto-null, \$385.00

More HEWLETT-PACKARD TEST EQUIPMENT, most one-of-a-kind, USED-REPARABLE with output: *****
HP-181A STORAGE SCOPE w/1804A 4-channel and 1825A time base plug-ins, \$450.00

182T SPECTRUM ANALYZER, large screen with 8558B 0.1 to 1500 MHz RF section, \$1800.
652A TEST OSCILLATOR, 10 Hz-10 MHz, \$175.
654A " " " w/auto-level, \$200.
1200B SCOPE, DC-500 KHz dual trace, \$300.
1600S LOGIC ANALYZER, \$250.
1615A " " " " \$250.
1722B SCOPE, DC-275 MHz w/LED-MPU, \$850.
1725A " " " " DC-275 MHz dual channel \$625.
3406A RF VOLTMETER, 10 KHz-1.2 GHz, \$450.
3456A INTEGRATING DIGITAL MULTIMETER \$750.
3490A 5-DIGIT MULTIMETER, \$250.
5327A 500 MHz FREQUENCY COUNTER, \$150.
5343A MICROWAVE COUNTER 0.5-26 GHz, \$1500.
5355A MICROWAVE FREQ-CONVERTER w/5356A head for 5345A counter, 1.5-18 GHz, \$900.
8005B PULSE GENERATOR, dual +/-10 V, \$350.
8007B " " " " 100 MHz rep, \$500.
8012B " " " " 50 MHz rep, \$195.
8403A MODULATOR CONTROL with 8732B, 8733B or 8734B PIN modulators, \$600 each.
8443A TRACKING GENERATOR f/8553B, \$350.
8507A RF NETWORK ANALYZER, \$3500.
8640B opt 1 RF GENERATOR w/audio oscillator option; 20 Hz-512 MHz AM-FM, \$1750.
8640B opt 1-2-3, 20 Hz-1024 MHz, \$2400.
8655A SYNCHRONIZER/COUNTER f/8654AB, \$650.
8660C RF GENERATOR w/86602B 1-1300 MHz & 86633B AM/o Locked FM plug-ins, \$3750.
8660B with 86602A and 86633B, \$3350.

Other TEST EQUIPMENT in stock, REPARABLE:
BOONTON 74D CAPACITANCE BRIDGE, \$250.
75A-S8 CAPACITANCE BRIDGE, \$200.
91DA RF VOLTMETER w/probe, ranges 1 mV-3 V, 20 KHz-1.2 GHz, \$115.
92B RF MILLIVOLT, 100 uV-3 V, \$150.
CUSHMAN CE-3 COMMUNICATIONS MONITOR, \$600.
ESI PVB-300 POTENTIOMETRIC VOLT BRIDGE \$200.
2100 VIDEO BRIDGE, automatic RLC, \$1250.
FLUKE 3330B DC VOLT-CURRENT CALIBRATOR \$1200.
GENERAL RADIO 1026A RF SIGNAL GENERATOR, 9.5 to 500 MHz AM-FM, \$250.
GR-1390B RANDOM NOISE GENERATOR, \$125.
1550A OCTAVE BAND ANALYZER, \$125.
1558A OCTAVE NOISE ANALYZER, \$200.
1562A SOUND LEVEL CALIBRATOR, \$75.
1565A SOUND LEVEL METER w/pick-up, \$125.
1644A MEGOHM BRIDGE 10 to 10 ohms \$495.
1650B RLC BRIDGE inductance-cap-res \$350.
1900A WAVE ANALYZER, 20-54000 Hz, \$250.
LEEDS & NORTHRUP 8686 MILLIVOLT-POT, \$200.
L&N 8693-2 TEMPERATURE POTENTIOMETER, \$150.
SIERRA 164B WATTMETER w/500 watt elements 181A250 25-250, 181A1000 200-1000 MHz \$200.
TEKTRONIX T922 SCOPE dual trace 15 MHz \$250.
T932 OSCILLOSCOPE dual trace 35 MHz \$350.
WAVETEK 750 DIGITAL PHASE METER, \$350.
2001 SWEEP GENERATOR, 1-1400 MHz, \$850.
2002A SWEEP GENERATOR, 1-2500 MHz, \$1250.

H-P COMPUTER EQUIPMENT, used-reparable:
85B PERSONAL COMPUTER, \$450.
2671 GRAPHICS PRINTER, \$100.
3495A MULTIPLEXER SCANNER, \$125.
6942A MULTIPROGRAMMER, \$250.
9845B/290 COMPUTER w/9866A printer, \$350.
45851A TOUCHSCREEN II COMPUTER w/9123D dual 3.5" floppy drive, \$450.
TEKTRONIX 4695 PRINTER, \$100.



Q-METER

TS-617C Q METER, updated military version of Boonton 160, measures Q of coils in full scale ranges of 100-250-500-750 read on 4.5" dia meter. Selectable freq-ranges: 50-150, 150-450, 450-1500 KHz, 1.4-4.5, 4.5-12, 12-25, 25-50 and 50-75 MHz. Controls for Inductance/Capacitance 0.9 uH/450 pf to 13 uH/31 pf, +/-3 pf trim. Can also be used to help determine inductance. With manual copy for Boonton 160. Requires 100-130/200-260 VAC 49-450 Hz; 12x20.5x9, 42 lbs sh. USED-REPARABLE, \$165.00

INDUCTANCE-CAPACITANCE STANDARDS KIT for TS-617C, set of 14 plug-in coils to allow more precise measurements of Q. Includes storage case with 115 VAC heater cord; 32 lbs sh. USED, \$125 w/TS-617C purchase.

HP-201CR OSCILLATOR

HEWLETT-PACKARD 201CR AUDIO OSCILLATOR, 20 Hz to 20 KHz in three decade ranges; +/-2% stability. Output 3 watts max or 42.5 V into 600 ohms; 50 V max no-load. Distortion <0.5% 50 Hz-20 KHz @ 1 W, <1% 20 Hz-20 KHz 3 W. Attenuator 0-40 DB in 10 DB steps. Rack-mount; 7x19x10.3, 25#. UNUSED w/book, \$145.

OSCILLATOR

TRANSISTORIZED CRYSTAL OSCILLATOR and BUFFER, 56 to 99 MHz with 75°C temperature controlled oven. Requires 5th overtone HC-6 (20 pf) crystal (not supplied). Has external oscillator input plus tuning meter & oven output. Requires 12-18 VDC regulated for oscillator; 22-39 VDC 1 amp for heater. W/BNC and SMA RF connections; DEC-9P plug for power. Part of GRT-21/22 xmitters. 6.5x2x3.3, 3 lbs sh. #OSC-8004290G1, used with schematic. \$9.95

5 MHZ STANDARD

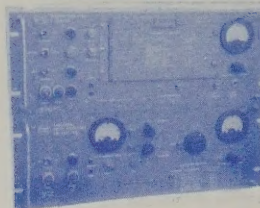
FREQUENCY STANDARD MODULE from R-1051* and RT-618* radios; usable as replacement or adapt to other need where standard is required. Crystal oven with 5 MHz crystal provides 5 MHz sine-wave output (approx 1.8 V) plus possible non-sine outputs dual 500 KHz, 1 & 10 MHz. Designed stability: 1 part in 10⁸ / day. Requires 18-24 VDC input. 4.4x3x4.5, 2 lbs. #6625-078-4718, used-checked, \$20.00

10.0 MHZ CRYSTAL OSCILLATOR on piece of unused transceiver circuit card with rated frequency stability of 2 parts per million over 6 months. Out-2 V @ 10 MHz. Requires 12 VDC; 1.4x1.4x0.5, 1 lb sh. EG&G #T334-10M, \$9.95

EXCITER & 500 KHZ IF

HF TRANSCEIVER MODULES from a 1980's HF unit; in metal enclosure; may be production "rejects". No specific info. 1x7.8x3.3, 2 lbs. UNUSED: ++++++ RF EXCITER MODULE, mixes 500 KHz USB signal with synthesized frequency to produce and amplify modulated RF in HF range. Synthesizer (not available) supplied 74.5/75.5 (LSB/USB) and 77-105 MHz depending upon desired output frequency; RF output is low level. Requires +5, +12, -12, +28 VDC; with pinout. #RF-EXC-1512, \$25.00 500 KHZ IF RECEIVER MODULE, 500 KHz input to module is filtered by Collins #526-8479-030 mechanical filter (3.5 KHz width centered 501.5 KHz) and is mixed with 500 KHz signal to produce audio. Sideband selected in other module (not available). #500-IF-1512, \$35.00

VHF XMITTER-AMPLIFIER



AN/GRT-18 VHF XMITTER-AMPLIFIER SET, solid-state system made by Grainger Associates operates on single crystal-controlled channels in the 120-152 MHz range @ 50 watts out. T-949 transmitter has meter to monitor Oscillator, Buffer/Doubler, Output 30 W Forward & Reflected, Modulation 0-100%, Voltages. Trimmer controls for Carrier PTT-ON, Mod Gain, RF Gain, & Mod meter Set, and Mic Gain. AM-4531 power amp uses 8122 power tube. Metering for Plate to 2 KV, Screen to 1 KV, Plate RF Peak to 1 KV, Bias to -100 V, Forward & Reflected Power to 100 W. Also Plate Current meter 0-300 MA, Loading & Coupling controls with lock, and Bias Adjust. Set also includes Amphenol 360-11896-1003 double pole antenna transfer relay and interconnect cables. Manual not available. Requires 105/115/130/210/230/260 VAC 47-400 Hz. Each 7x19x14.5; 85 lbs total sh-wt. USED, \$225.00

MD-522A FSK CONVERTER

MD-522A/GRC MODEM, a transistorized modulator-demodulator for radio teletypewriter systems. Often used with GRC-106/106A HF radios and teletype-writers TT-4A, TT-76, TT-98, UGC-4, or UGC-74. Permits transcription of voice, narrow (NSK) or frequency (FSK) shift keying, freq-diversity, and NSK+voice. Center frequencies: 2000 Hz FSK, 2805 Hz NSK, 425 Hz diversity. Shifts 850 Hz FSK, 85 Hz NSK. Operates one-way or duplex Send-Receive. Internal loop voltage 120 VDC 60 ma max. Signal mode neutral. Signal level: 0 ma Normal Space; 20 or 60 ma regulated Normal Mark selected on front panel. Has 2B1P CRT for visual display of signals; also U-77 mic and 600 ohm audio connections. Original voltage-current meter removed by gov't, but we will supply usable replacement for customer to install. Most connectors not available. Requires 24-28 VDC 1.4 amps; 7x18x13, 41 lbs. USED, \$165.00; POWER INPUT CONNECTOR, \$7.50 MT-3140 MOUNT for MD-522, used, \$20 w/set. MANUAL for MD-522A, part-repro, \$25 w/set.

PRR-9/PRT-4A RADIOS

GOVERNMENT-RECONDITIONED PRR-9 & PRT-4A HELMET RADIOS, each single channel with crystal for 51 MHz FM operation; CARG-color. PRR-9 RECEIVER requires 5 V 25 ma battery power; 7x3.5x1.5, 1 lb. PRT-4A TRANSMITTER has two channel selection and Tone - Voice switch; 450 MW output Channel 1. Requires 12 VDC battery power; 9x3.6x2, 2 lbs. AN/PRR-9 with earphone, LESS antenna, \$50.00 AN/PRT-4A with antenna & battery box, \$50.00 MANUAL for PRR-9/PRT-4A, partial repro, \$15.

RADIAC SET

AN/PDR-63 RADIAC SET, small modular unit, IM-226 high range module measures gamma 0-10-100-1000 rad/hour. Low range module DT-507 connects by cable and detects 0-1-10-100-1000 mrad/hr. Separate skin dose probe DT-508 simulates radiation absorption of human skin and indicates 0-500-5000 rad/hr. Requires four AA batteries (not supplied). PP-6597 charger charges AA nicads from 115 VAC or 24 VDC input. Also includes H-43 headset, transit case and manual. Case 8.6x12x8.5; o/a 15 lbs. USED, \$165.00



0.5-32 MHZ RECEIVER

R-392/URR RECEIVER, 0.5 to 32 MHz AM-CW in 32 one MHz bands using mechanical digital tuning. Triple conversion on lower 8 bands, double on others. Selective bandwidth 2-4-8-16 KHz; 100 KHz xtal calibrator. With 25 tubes: 26A7, 26A6, 26C6, 26D6, 6AJ5, 12AU7. Requires 24-28 VDC 5 amps. Rugged vehicular version of R-390 receiver. 11.5x14.3x11, 58 lbs sh. USED-CHECKED, \$185. CHECKED, \$265. ++++++ "R-392 AS-IS": Receiver less meter and all knobs except tuning knobs; otherwise electronically complete. Good for parts etc. VISUALLY INSPECTED ONLY--NOT TESTED! \$99.50 ++++++ MANUAL for R-392, partial repro, \$15.00 9-PIN FEMALE POWER CONNECTOR f/R-392, \$9.00 LS-166 SPEAKER for R-392, used, \$15.00 115 VAC POWER SUPPLY f/R392-no connector \$25



1.5-20 MHZ TRANSMITTER

T-195/GRC-19 TRANSMITTER 1.5-20 Mhz AM-CW-FSK in ten bands manual or auto tune. Power output 100 W (1.5-12), 90 W (12-16), 80 W (16-20 MHz). Uses two 4X150D tubes in power amp & 20 other tubes. Requires 22-30 VDC 42 amps input (9 amps "standby") for dynamotor supply. With voltage monitor meter, but LESS VU-METER; companion to R-392 receiver. 11.5x22x14.5, 135 lbs. USED-REPARABLE, \$185. T-195-B, has solid-state power supply, \$235. MANUAL for T-195, partial repro, \$20.00 POWER CONNECTOR for T-195, \$7.50

38-54.9 MHZ RADIO SET

AN/VRC-18 RADIO SET for 38-54.9 MHz FM range as used in 1950-60's military vehicles. Includes GOVERNMENT-RECONDITIONED units RT-68 transceiver, R-110 receiver, PP-112 & PP-282 24 VDC power supplies, and MT-327 rack. (Paint color may not be matching.) Also includes accessory kit of M-29 mic, H-63 & H-113 headsets, GSA-6 chest set, LS-166 speaker, AB-15 mast base, AB-24 antenna, CW-206 antenna bag, cables, manuals, etc. Meter and knobs removed from radios but we will supply "used" replacements for customer to install. 20x13x13; o/a 185 lbs sh. \$250.



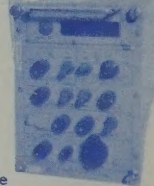
AMPLIFIED SPEAKER

AM-4979/GRC SPEAKER-AUDIO AMP, for monitoring audio of R-442, RT-246-524 radios from remote locations. Connection for M-80 mic or H-189/250 handset allow remote keying of transceiver; also 6 ft cord w/U-229 plug. Requires 24 VDC; can be modified for 12 VDC. Schematic inside. 5.6x5x3 + 2" top mtg bolt; 4 lbs. USED-CHECKED, \$32.50. Power Plug, \$6



VLF RECEIVER

R-1449/WLR-6(V) VLF RECEIVER, 1-600 KHz in bands 1-30, 30-75 75-150, 150-300 & 300-600 KHz. IF bandwidth: 150 Hz, 1, 3, or 6 KHz. Input attenuator 0 to -60 DB in 20 DB steps. BFO -3 to +3 KHz. Has 4-digit gas tube readout with decimal shift for 5th digit. All transistor receiver is plug-in module for WLR-6; made by CEI and similar internally to CEI 357/R-1401. Requires 115 V 50-400 Hz; 18x8.8x6.5, 29 lbs. USED-REPARABLE, \$175



KWM-2A FILTER

COLLINS MECHANICAL FILTER for KWM-2A transceiver; 455 KHz IF, bandwidth 2.7 KHz. 2.4"L x 0.4" dia. #526-9337-000, NEW, \$32.50